

TRANSFORMER RANGE HEAVYPOWER SERIES

High Reliability Modular Connectors



- ▶ **High Density Modular Solution**
- ▶ **High Power, up to 300A**
- ▶ **Reliable Aluminium Power & Hyperboloid Contact Technologies**

INNOVATIVE MODULAR DESIGN

The HeavyPower Series is part of the Transformer range, a comprehensive series of high density, modular connectors for all on-board power applications within the rail market.

The Transformer's modularity enables customers to design their own solution by supplying the elementary components of the whole connector. It employs a unique do-it-yourself system based on the building block principle. The connector is suitable for any applications requiring the transmission of very high currents such as power distribution, intercoaches and bogies.

HIGH RELIABILITY

The HeavyPower Series is available in 1 to 4 pole versions, supporting up to 300A per pole and a voltage rating of 3600V. The HeavyPower connector is offered with straight termination, that allows for the easy mounting on the roof or under the car's

floor or with right angle termination to facilitate the mounting between two cars. As a variant, the HeavyPower Y Series is also proposed as a branch connector acting as a junction box.

The connector uses the Smiths Connectors' High Power Contact (HPC) technology in aluminum or in copper that allows for more contact points to reduce overheating and to achieve low mating force during the connection.

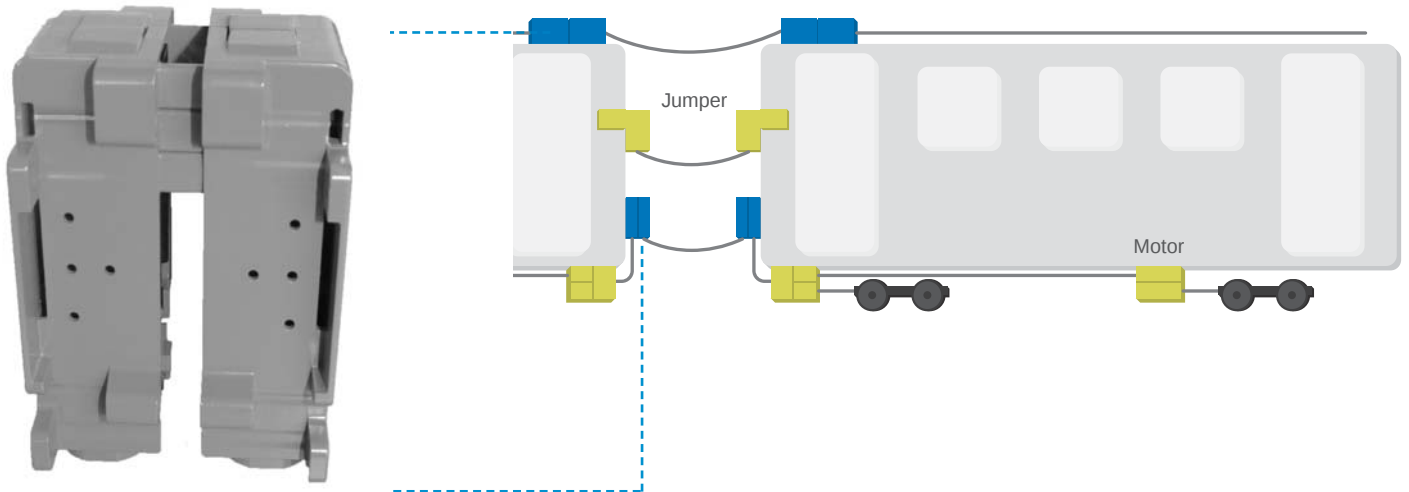
In addition, one contact size fits with the cross section cables from 25mm² to 50mm², with consequent reduction of supply chain and cabling costs.

IDEAL FOR RAIL INDUSTRY

The HeavyPower Series range is compliant with the main railway standards: NF F 61-030, EN 50647 and EN 60373. The connectors also conform to EN 45545 fire and smoke standards and are made of plastic materials following NF F 16-101/102.

APPLICATIONS

Meeting All On-Board Power Application Requirements



TECHNICAL CHARACTERISTICS

HeavyPower Series Features & Specifications

FEATURES

- ▶ Rugged and modular connector
- ▶ Straight and right angle termination styles
- ▶ 4 coding keys
- ▶ Easy assembly with no special tooling
- ▶ Cable section size from 25mm² to 50mm²
- ▶ Locking by screws and coding devices according to 11.5.2.3 NF F 61030
- ▶ IP66, IP67 rating according to NF EN 60529
- ▶ High Power Contact (HPC) technology
- ▶ Fire and Smoke standards according to NF F 16-101, 16-102 and EN 45545-2 (HL for RV22 and RV23)

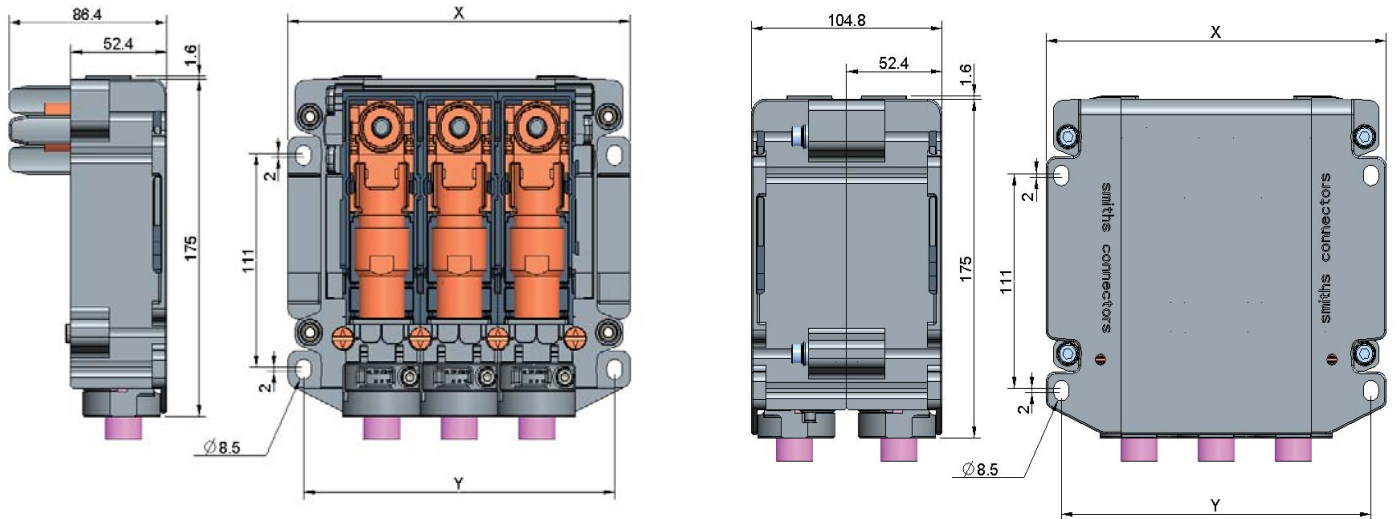
SPECIFICATIONS

- ▶ **Number of Poles:** 1 to 4
- ▶ **Contact Pin Diameter:** Ø10
- ▶ **Current Rating:** up to 300A
- ▶ **Voltage Rating:** 3600V
- ▶ **Withstanding Voltage Rating:** 12KV
- ▶ **Temperature Rating:** -55°C to 125°C
- ▶ **Contact Material:** Copper or aluminum
- ▶ **Contact Retention:** acc. to 11.5.5 NF F 61 030
- ▶ **Connector Material:** Plastic and aluminum
- ▶ **Endurance:** 500 mating cycles
- ▶ **Dry Heat:** acc. to 11.6.2 NF F 61 030

DIMENSIONS

HeavyPower Connectors

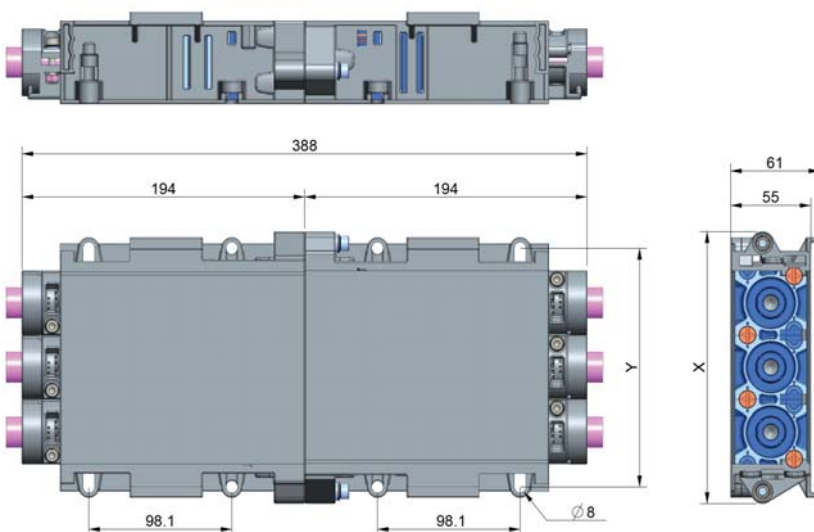
► HEAVYPOWER RIGHT ANGLE TERMINATION



POLE NUMBER	X	Y
1	102.5	85.5
2	145	128
3	187.5	170.5
4	230	213

Dimensions are in mm

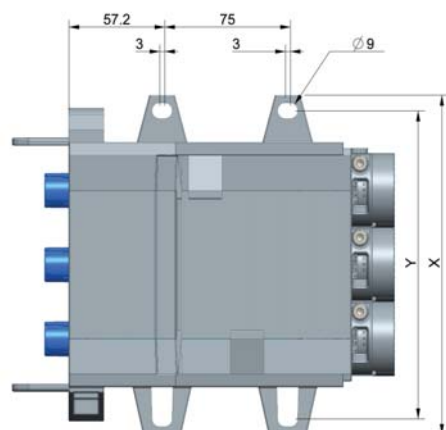
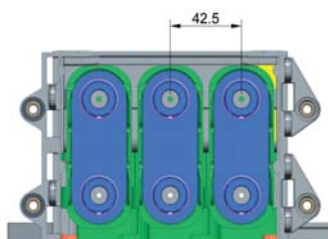
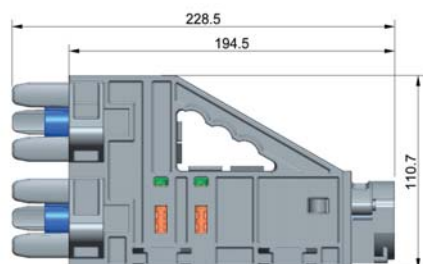
► HEAVYPOWER STRAIGHT TERMINATION



POLE NUMBER	X	Y
1	94.5	72.5
2	137	115
3	179.5	157.5
4	222	200

Dimensions are in mm

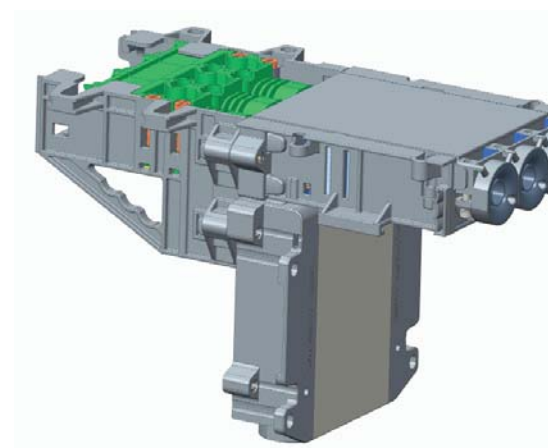
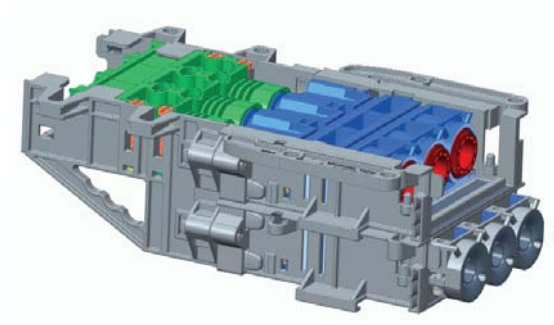
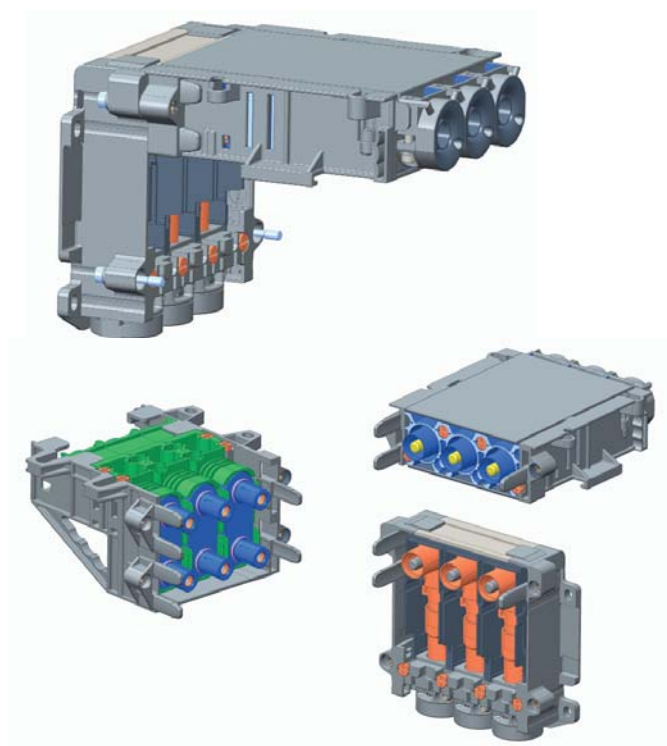
► HEAVYPOWER Y, BRANCH CONNECTOR



POLE NUMBER	X	Y
1	91.5	109.4
2	133.9	151.9
3	176.4	194.4
4	218.9	236.9

Dimensions are in mm

► CONNECTOR CONFIGURATIONS



TECHNOLOGIES

HYPERBOLOID

Excellent signal integrity
Exceptional mating cycles
Low contact resistance
Resistance to fretting



HPC (High Power Contact)

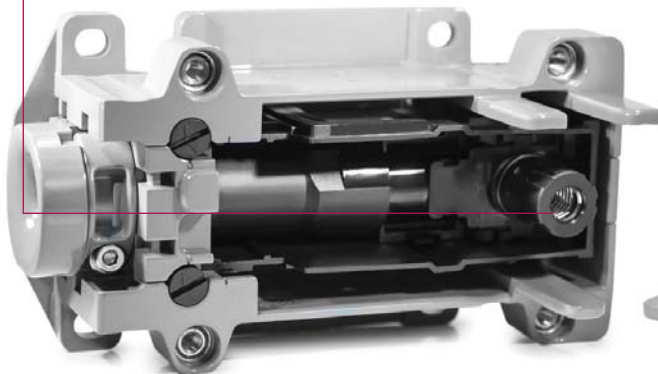
High current rating (from 100A to 1000A)
Light weight: copper or aluminum alloy materials
Low mating forces
Customizable



FEATURES & BENEFITS

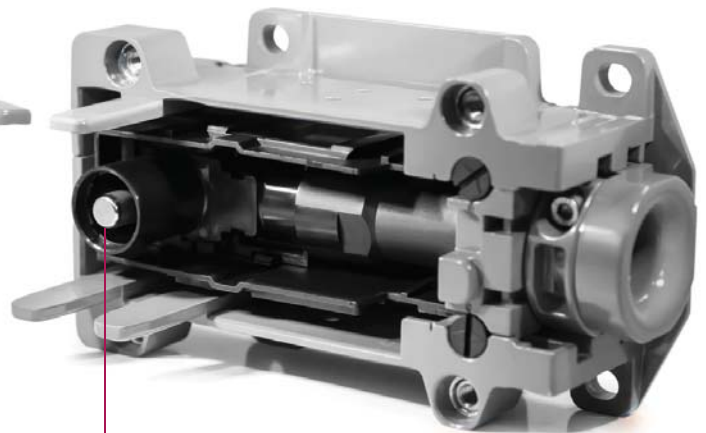
▶ HIGH CURRENT

Up to 300A per pole



▶ DURABILITY

More than 500 mating/unmating cycles



▶ CUSTOMIZABLE

Innovative customer keyability and flexible design

▶ MODULARITY

Multiple configurations using common components

HOW TO ORDER

T	S	H						0					0			0	0
1	2	3					4					5			6	7	8

1 ▶ HEAVYPOWER CONNECTOR SERIES *[Fixed]*

2 ▶ CONNECTOR VERSION

S STRAIGHT

R RIGHT ANGLE

Y BRANCH

3 ▶ CONNECTOR TYPE

M MALE

F FEMALE

4 ▶ CONTACT ARRANGEMENT *[Each digit corresponds to a pole, please configure each pole according to the requested cable section]*

0 WITHOUT CONTACTS

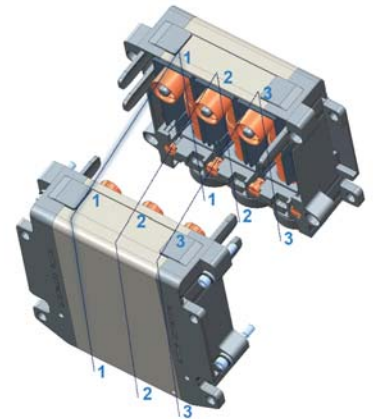
A 25mm², crimp copper

D 35mm², crimp copper

G 50mm², crimp copper

For example, the reference for the contact arrangement of a 3 pole version can be **DAG00**. This means that the 1st pole is equipped with a crimp contact for 35mm² cable section, the 2nd one for 25mm² and the 3rd one for 50mm². The last 00 digits indicate that no contact is required.

DAG00



5 ▶ CABLE GLAND *[Each digit corresponds to a pole, please configure each pole according to the requested cable gland]*

0 WITHOUT CABLE GLAND

B Ø 24.5mm to 30.5mm

D Ø 16mm to 21mm

A Ø 30mm to 36mm

C Ø 19mm to 25mm

E Ø 12.5mm to 16.5mm

6 ▶ PROTECTION

0 WITHOUT PROTECTION

B BALAST

7 ▶ SWING EQUIPMENT

S WITH

0 WITHOUT

8 ▶ ACCESSORIES *[Fixed]*

smiths connectors

FOR MORE INFORMATION | smithsconnectors.com |



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